

Field of study: *Physics (Studies in English)*

Profile: general academic

2-year second cycle program, full-time

Academic year: 2024/2025

Specialization: **Theoretical Physics**

First year, semester 1

Course title	Course code	Form of classes	Option A		Option B		Learning outcomes assessment
			Number of hours	Number of ECTS points	Number of hours	Number of ECTS points	
Physics Laboratory, 2nd A	1100-4PLA	lab	45	5	45	5	written report (grade [#])
Elective course from the Statistical physics list	1100-4SPA or 1100-4SPB	lecture	45	7	45	7	written or oral exam
		exercises	45		45		
Intellectual property and entrepreneurship (Option A) or Intellectual property and entrepreneurship with team project (Option B)	1100-4IPE or 1100-4AF16	lecture	30	2	30	5	written exam
		project	0	0	75		project
Subject to choose from the Numerical analysis list			30	3	30	3	written exam or grade
Elective course from the Advanced Quantum Mechanics list		lecture	30	6	30	6	written or oral exam
		exercises	30		30		
Electives from the Topics in contemporary physics list			30	3	30	3	written exam or grade
Specialist seminar		seminar	30	2	30	2	grade
OGUN (General University Courses)*			30	3	30	3	written exam or grade
In total (1st semester)			345	31	420	34	

First year, semester 2

Course title	Course code	Form of classes	Option A		Option B		Learning outcomes assessment
			Number of hours	Number of ECTS points	Number of hours	Number of ECTS points	
Introduction to Philosophy	1100-IP	seminar	30	3	30	3	grade
Subject to choose from the Numerical analysis list			30	3	30	3	written exam or grade
Electives from the Topics in contemporary physics list (Option A or Option B)			180	18	150	15	written exam or grade
Specialist seminar		seminar	30	2	30	2	grade
OGUN (General University Courses)*			30	3	30	3	written exam or grade
In total (2nd semester)			300	29	270	26	

Second year, semester 3

Course title	Course code	Form of classes	Option A***		Option B		Learning outcomes assessment
			Number of hours	Number of ECTS points	Number of hours	Number of ECTS points	
Work placement	1100-WP	internship	80	4	80	4	written report (grade)
Team project**	1100-TP or 1100-ZPS2	project	75	5	0	0	grade
Electives from the Topics in contemporary physics list			120	12	120	12	written exam or grade
Specialist seminar		seminar	60	4	60	4	grade
Workshop in theoretical physics I	1100-5WTP1	workshop	120	10	120	10	grade

In total (3rd semester)	455	35	380	30
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Second year, semester 4					
Course title	Course code	Form of classes	Number of hours	Number of ECTS points	Learning outcomes assessment
Proseminar Challenges of the modern times	1100-PCMT	seminar	20	2	grade
Proseminar Theoretical physics	1100-5sTP	seminar	30	3	grade
Workshop in theoretical physics II	1100-5WTP2	workshop	240	25	submission of a master's thesis accepted by the supervisor
In total (4th semester)			290	30	

In total	Option A		Option B	
	Number of hours	Number of ECTS points	Number of hours	Number of ECTS points
1 year	645	60	690	60
2 year	745	65	670	60
1 and 2 year	1390	125	1360	120

Comments:

* The completion of 5 ECTS from subjects in the fields of humanities or social sciences is required as part of the study program.

** A team project can be completed within a dedicated course or as part of other courses in the study program, provided that the organization of the subject's classes involves teamwork.

*** Option A is obligatory for those students who did not complete a team project during the first year

Passing with a grade means that the grade is awarded based on one or more written assessments conducted during the course of the didactic classes or based on